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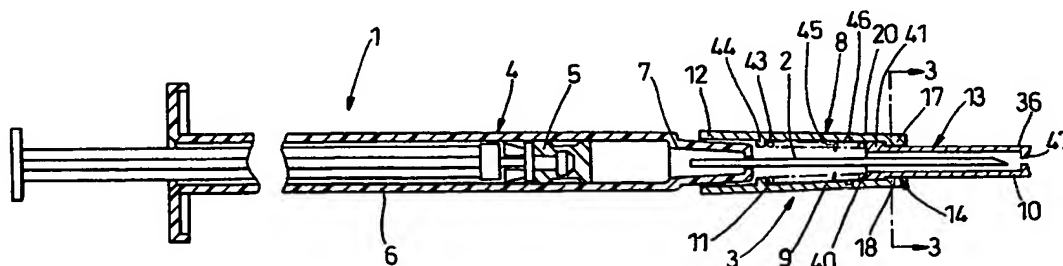
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(54) Title: INJECTION NEEDLESTICK INJURY PREVENTION DEVICE



(57) Abstract: A needlestick prevention device for an injection device (1) having a hollow needle (2) comprises a sheath having a first member (9) for attachment to the injection device (1) and a second member (10) slidable longitudinally relative to the first member (9) to expose or to cover the needle (2), and spring means (11) biasing the second member (10) to cover the needle (2). The first and second members (9, 10) have interengaging guide means (13) and locking means (14), including a first guide part (23) operative to allow free longitudinal sliding movement of the second member (10) relative to the first member (9), and a second guide part (24) operative on movement by manual relative rotation of the first and second members (9, 10) and following release of a force urging the second member (10) to expose the needle (2). The spring means (11) urges the second member (10) to cover the needle (2) and to operate the locking means (14) to retain the second member (10) covering the needle (2). This allows free movement of the second member (10) in the first guide part (23), allowing for filling of the syringe (1), but then automatic sheathing and locking when the user simply twists the second member (10) relative to the first (9).

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/02546

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61M5/32

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 472 430 A (WELTER ET AL.) 5 December 1995 (1995-12-05) abstract; figures 1-5	1-21
A	US 4 813 940 A (PARRY) 21 March 1989 (1989-03-21) cited in the application abstract; figures 1-7	1-21
A	US 4 911 693 A (PARIS FRASSETTI R) 27 March 1990 (1990-03-27)	
A	US 5 984 899 A (D ALESSIO ET AL.) 16 November 1999 (1999-11-16)	

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Further documents are listed in the continuation of box C.

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Patent family members are listed in annex.

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Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5472430	A	05-12-1995	NONE	
US 4813940	A	21-03-1989	AT 60239 T	15-02-1991
			AU 8076387 A	06-05-1988
			AU 601518 B2	13-09-1990
			AU 8140687 A	26-05-1988
			CA 1289028 C	17-09-1991
			DE 3767668 D1	28-02-1991
			EP 0268445 A2	25-05-1988
			WO 8802640 A2	21-04-1988
			GR 3001478 T3	08-10-1992
			IN 170152 A1	15-02-1992
			IN 170421 A1	21-03-1992
			JP 2583249 B2	19-02-1997
			JP 63139564 A	11-06-1988
			NZ 222590 A	29-01-1990
US 4911693	A	27-03-1990	NONE	
US 5984899	A	16-11-1999	US 5795336 A	18-08-1998
			US 5389085 A	14-02-1995
			US 5292314 A	08-03-1994

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